

Parental Socio-Demographic Factors and Adolescent Depression in Rural Aceh, Indonesia

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ABSTRACT

OBJECTIVE: This study aimed to identify the relationship between parental socio-demographic factors and depression among adolescents in the rural area of Aceh, Indonesia.

METHODOLOGY: This correlative study involved 120 participants from two senior high schools in Aceh Besar, Aceh province, Indonesia. The participants were selected using a purposive sampling method. The inclusion criteria were students who lived in a rural area, lived with both parents (mother and father) and had no communication disorders. Data were collected by using self-report questionnaires, including a demographic data questionnaire and a depression data questionnaire that was collected by using Kovacs's Children's Depression Inventory (CDI). The data were collected in August 2024 and analyzed using the Chi-Square test.

RESULTS: The result of the analysis showed that there is a relationship between parental education ($p < 0.001$) and family type ($p < 0.001$) with the incidence of depression. However, there is no relationship between parental income and depression among adolescents ($p < 0.576$).

CONCLUSION: Adolescents with low-educated parents and extended family showed a higher incident rate of depression compared to others with high education and have nuclear family. Then, health workers, especially family health nurses who are interested in developing an intervention for preventing depression among adolescents, pay more attention to adolescents with low educated parents and have an extended family.

KEYWORDS: Depression, adolescents, family, income, education

INTRODUCTION

Mental health is an essential aspect of achieving optimal health and well-being. However, currently, the prevalence of mental health problems is still high globally and has a negative impact on the global burden of morbidity and mortality¹. According to the World Health Organization (WHO) 2023, the lifetime prevalence of mental disorders ranges from 18.1 to 36.1%. Two common mental health problems are depression and anxiety², which will place a heavy burden on individuals and society³. According to a study published in 2019 by the Global Burden of Disease Study, depressive disorders constitute the

highest disease burden among mental illnesses and according to the World Health Organization (WHO) 2020 more than 264 million people worldwide suffer from depression, and approximately 850,000 deaths are caused by depression every year².

Mental health problems develop from adolescence⁴, and there are increasing concerns about adolescent mental health, especially in developing countries. It is estimated that 10-20% of children and adolescents are affected by mental health problems worldwide⁵. Two common psychological problems that attack teenagers are depression and anxiety^{6,7}, and it is estimated that one in four teenagers experiences depression⁷. This problem also occurs frequently in Indonesia; around 6% of the population aged 15 years and over reported symptoms of depression or anxiety⁸.

The high incidence of depression and anxiety, especially among adolescents, needs special attention because depression, anxiety and their subclinical symptoms are the leading causes of disability among adolescents⁹, and it will have an impact on their subsequent development process, cause significant losses in their social relationships and their physical well-being^{7,10,6}.

Various factors can cause teenagers to be at risk of experiencing depression and anxiety, including rapid growth and development both physically and psychologically; many of these changes co-occur, including puberty and the transition to high school.

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This transition period will trigger various psychological stresses, which in the long term can endanger mental health conditions if not handled properly^{11,7}. In addition, adolescence is a period of increased stress sensitivity, which triggers the emergence of mental health problems, such as fatigue, depression, anxiety and externalizing problems. Furthermore, other factors include a lack of involvement in learning and recreational activities, as well as teenagers' low knowledge about mental health (Hart et al., 2022, . The use of the Internet and electronic games can also trigger mental disorders in today's teenagers¹².

Then, parental socio-demographic factors also contributed to adolescent mental health. A previous study reported that Lower socioeconomic status (SES) is associated with higher odds of having depression. Another study also indicated that the level of parental education is related to children's mental health¹³. However, there is still limited study about the relationship between parental demographic factors and adolescent depression, especially in Indonesia. Therefore, this study aimed to evaluate the association between parental sociodemographic factors and teenage depression in rural Aceh, Indonesia.

METHODOLOGY

Study Design

This research used a cross-sectional study method which aimed to identify the relationship between parental socio-demographic factors and depression among adolescents in the rural area of Aceh, Indonesia.

Population and Sample

The population in this study consisted of students from two senior high schools in Aceh Besar, Aceh Province, Indonesia. The purposive sampling technique was used to select participants in this study, and 120 respondents were selected. The number of samples was determined using a medium effect size with a power of .08, a confidence level at 95% and an alpha of .05 with a value of $d = .60$. Sample inclusion criteria were respondents who live in the rural area, lived with both parents (mother and father) and did not have any communication disorders. The sample exclusion criteria were respondents who did not have parents, father and mother, did not live with parents, and had communication problems. A purposive sampling technique was used to obtain a homogeneous sample. The researchers approached the participants with the assistance of school teachers. The teachers were informed about the inclusion and exclusion criteria of the sample. The students who met the inclusion criteria were placed in a data-collection class. Researchers administered the questionnaire to the students in the class and waited until the students' answer was submitted. The study was at two senior high schools in Aceh Besar, Aceh Province, Indonesia. The two schools were selected because they were located in remote village areas,

and the majority of students have poorly educated parents. The data was collected in August 2024.

Instrument

The data collection tool in this research was a self-report questionnaire consisting of respondent characteristics data and depression data. Characteristics data include gender, parent education, parent income and type of family. The depression data was collected by using Kovacs's Children's Depression Inventory (CDI). CDI is one of the most frequently used self-reports for the assessment of depressive symptomatology in adolescence. It was created from the Beck Depression Inventory to be administered to school age children and adolescents. The CDI consists of 27 items; each item has three possible responses ranging from 0-2, with 2 representing the severe form of a depressive symptom and 0 representing the absence of that symptom. The total score ranges from 0-54; high scores reflect high depression, and low scores reflect low depression. The raw score of 20 was established as the cut-off point. Therefore, in this study, a score of 20 or more is categorized as high depression and less than 20 is classified as low depression. The CDI has a reliability value of 0.87¹⁴. Then, the CDI instrument itself was validated in Indonesian. Therefore, it can be used for Indonesian adolescents, including Acehnese adolescents.

Data Analysis

Data analysis used descriptive statistics, including frequency, percentage, mean, and standard deviation. Then, a Chi-Square test was used to determine the correlation between independent and dependent variables. A chi-square test was used because both variables in this study (dependent and independent variables) were categorical.

RESULTS

Characteristics of Respondent

The characteristics of respondents in this study included gender, parents' education, parents' income, and family type. The data is presented in **Table I**.

Table I: Characteristics of Respondents

Characteristics	f	%
Gender		
Female	61	50,83
Male	59	49,17
Parent's Education		
High (Bachelor Degree)	11	9,17
Moderate (Senior High School)	26	21,67
Low (Elementary/junior high School)	83	69,16
Parent's Income		
High	4	3,33
Low	116	96,67
Type of family		
Nuclear family	98	81,67
Extended family	22	18,22

Parental socio-demographic factors and depression

Three independent variables were analyzed using the Chi-Square test, including parents' education, income, and family type. Parents' education was categorized into low (Elementary school/junior high school), moderate (senior high school), and high (bachelor's degree). Then, the parent's income was categorized based on the provincial minimum wage; it has two categories: high (3.460.672 Rupiah or above) and low (less than 3.460.672 Rupiah). Type of family includes nuclear family (composed of father, mother and their children) and extended family (composed of father, mother, children and others such as grandmother, grandfather or other family members). Then, depression was categorized into high depression (if the total score is 20 or above) and low depression (if the total score is less than 20). This current study indicated that the prevalence of depression was significantly higher among adolescents of low-education parents than adolescents of high-education parents ($C^2 = 43,836$; $p < 0,001$). Then, the prevalence of depression was also significantly higher among adolescents in the extended family than adolescents in the nuclear family ($C^2 = 17, 158$; $p < 0,001$). However, the analysis showed that the prevalence of depression was not significantly different between adolescents of low-income parents and high-income parents. The results of the study are presented in Table II.

Table II: Comparison of Depression among variables

Variables	Depression				Total	C ²	p
	High		low				
	f	%	f	%			
Parent's Education							
High	0	0	11	100	11	43,836	0,001
Moderate	4	15,38	22	84,62	26		
Low	11	13,25	72	86,75	83		
Parent's income							
High	0	0	4	100	4	1,145	0,576
Low	26	22,41	90	77,59	116		
Type of Family							
Nuclear family	14	14,29	84	85,71	98	17,158	0,001
Extended family	12	54,55	10	45,45	22		

DISCUSSION

The results of this study showed that parental education is related to depression among adolescents ($p < 0.001$). Education is the fundamental factor that encourages parents to be involved in parenting. Previous studies showed that fathers with higher education had high participation rates in any activities with their children because the high level of education can motivate fathers to be open and accepting of their children. Then, the higher education parent had a better plan for supporting their children's career, spiritual, moral and intellectual development.

Therefore, education is a protective factor against the emergence of various mental health problems, including depression. Parents with higher education have better general knowledge, reasoning abilities, interaction skills and emotional self-regulation than those with lower education. This study is in line with a previous study, based on the 2018 Indonesian Basic Health Research (RISKESDAS), which showed that the level of depression is lower in those with higher education. Furthermore, the 2017 Indonesian Happiness Index also showed that higher education levels are followed by higher happiness¹³.

The relationship between parental education and depression among adolescents can also be explained because it is related to social competence. Parents with higher education will have more significant social competence. These social competencies can support the application of social norms and behavior within the family, strengthening the formation of a positive self-concept and encouraging the implementation of positive behaviors among family members, including adolescents. One of them is behavior in dealing with problems and making decisions that can prevent depression in adolescents.

The results of this research are also supported by previous studies, which showed that the level of parental education is related to children's mental health¹³. Another study also concluded that there is a negative relationship between education and mental health¹⁵. Parents with better education will be better able to prevent various mental disorders in children, including depression¹⁶. Parental education will also contribute to parents' ability to educate their children. Moreover, parents will be more sensitive to their children's psychological conditions so they can understand the various mental health problems faced by their children. This will help prevent the emergence of depression in children, especially teenagers who are facing multiple problems during their transition from childhood to adulthood.

The subsequent finding from this research was that there is a relationship between family type and adolescent depression ($p < 0.001$). These results are in line with previous research, which found that household and family composition has an impact on depression¹⁷.

A family is a social group of one or more parents and their children. There are several differences in the classification of family systems, but the most commonly used are two types, namely nuclear family and extended family. The nuclear family system is a two-generation family consisting of a father, mother and children or one person, single, perhaps widowed, parents and their children. Meanwhile, a joint or extended family is three or more generations living together, both vertically and laterally, having one line of authority, either patrilineal or matrilineal; in an extended family, there are other family members besides father, mother and children. Several advantages and disadvantages of each type of family

have been reported, including social support, protection during crises, physical space, freedom of decision making and autonomy¹⁸.

Family type is one aspect of the family that is related to mental health indicators; it will correlate to family function. Families with appropriate functioning provide a protective effect against depression in school age children and adolescents, but families with poor functioning are more likely to report depressive symptoms. Families with hostile and neglectful relationships trigger changes in their children's nervous and hormonal systems, causing negative emotions of alienation within them that will have a negative impact on mental health. Meanwhile, a positive, supportive and cohesive family environment encourages optimal levels of mental health in adolescents⁶.

The relationship between family type and depression can also be related to family communication. Large families have more significant challenges in adjustment and communication, including decision-making and agreement processes. Family communication pattern theory stipulates that family members reach an agreement either by conforming to other family members (conformity orientation) or through discussion and debate (conversation orientation)¹⁹. The family is an example of control and provides socio-emotional support. The importance of the family in creating healthy behavior in children and adolescents has been demonstrated in many studies²⁰.

However, analysis of this research showed that there is no relationship between parental income and depression among adolescents ($p < 0.576$). This study categorized parent's income based on provincial minimum wage. There were two categories: high income (3.460.672 Rupiah or above) and low income (less than 3.460.672 Rupiah). There are several explanations regarding the results of this current study, which showed no relationship between income and depression. First, in this study, most respondents' parents had low income (96,6%), and only 3,44% of adolescent parents had high income. So, statistically, it is difficult to find associations between the dependent and independent variables. Then, in this study, the researchers only focused on short-term income, while a previous study found no relationship between short-term income (2 years) and self-rated health²¹. Another reason is related to the place of this study, which is a rural area where the communities are homogenous and have Close-knit communities with a strong sense of local identity. The rural communities can support each other despite having a low income and facing many financial problems. These characteristics can act as protective factors against depression among family members, including adolescents.

CONCLUSION

Adolescents with low-educated parents and extended

family showed a higher incident rate of depression compared to others with high education and have nuclear families. This study suggested that adolescents with low-educated parents and who have an extended family are at a higher risk of experiencing depression compared to those with high-education parents and who have a nuclear family. Therefore, health workers, especially family health nurses who are interested in developing an intervention for preventing depression among adolescents, are suggested to focus on adolescents with low educated parents and have an extended family. So, the intervention will prevent depression among adolescents effectively.

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Conflict of Interest: No conflicts of interest, as stated by authors.

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AUTHOR CONTRIBUTION

Fithria F: Initiated and conducted the research and drafted the manuscript.

Jannah SR: Initiated and conducted the research and drafted the manuscript.

Aiyub A: Conducted the research and contributed to revising the manuscript.

Alfiandi R: Conducted the research and contributed to revising the manuscript.

Husna C: Participated in revising the manuscript.

Darmawati: Participated in revising the manuscript.

Nirwan N: Participated in revising the manuscript.

All authors reviewed and approved the manuscript.

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